

RUI ZHANG
Department of Geophysics
Earth Science Division
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EDUCATION

PhD University of Houston 2010.09
Exploration Geophysics GPA 3.5 of 4
Advisor: Dr. John Castagna
Thesis: *Seismic inversion with basis pursuit*

WORK EXPERIENCE

Postdoctoral Fellow, Lawrence Berkeley National Laboratory	2013.02-present
Postdoctoral Fellow, University of Texas at Austin	2011.01-2013.01
Summer intern at Exxonmobil upstream research company	2009
Summer intern at G&W systems	2008
Summer intern at G&W systems	2007
Research assistant and Teaching assistant at University of Houston	2006-2010
Lecturer at China University of Geosciences	2003-2006

RESEARCH INTERESTS

My research interests include reflection seismology and inverse theory for subsurface property characterization. My current project is working on seismic modeling and inversion for anisotropic media related to CO_2 injection.

HIGHLIGHTED PUBLICATION

Zhang, R., and J. Castagna, 2011, Sparse-layer inversion with basis pursuit decomposition: *Geophysics*, 76, R147-158. <http://link.aip.org/link/?GPY/76/R147/1>

Zhang, R., M. K. Sen, P. Son and S. Srinivasan, 2012, Stochastic and deterministic seismic inversion methods for thin-bed resolution, *Journal of Geophysics and Engineering*, 9, 611. <http://iopscience.iop.org/1742-2140/9/5/611/>

Zhang, R., R. Ghosh, M. K. Sen and S. Srinivasan, 2012, Time-lapse thin-bed seismic inversion for CO_2 sequestration: A case study from Cranfield, Mississippi, *International Journal of Greenhouse Gas Control*. <http://dx.doi.org/10.1016/j.ijggc.2012.08.015>

Zhang, R., M. K. Sen and S. Srinivasan, A pre-stack seismic basis pursuit inversion, *Geophysics*, 78,1,R1-R11. <http://dx.doi.org/10.1190/geo2011-0502.1>

Zhang, R., X. Song, S. Fomel, M. K. Sen and S. Srinivasan, Time-lapse seismic data registration and inversion at Cranfield, *Geophysics*. (in review)

CONFERENCE CONTRIBUTIONS

Zhang, R., X. Song, S. Fomel, M. K. Sen and S. Srinivasan, 2012, Time-lapse surface seismic data registration and inversion for CO_2 sequestration at Cranfield, *AGU Annual meeting San Francisco*.

Ranjana Ghosh, M. K. Sen, **R. Zhang** and S. Srinivasan, 2012, Monitoring CO_2

movement by interpreting timelapse seismic data using rock physics modeling in the Tuscaloosa formation, Cranfield, MS Valley, *SEG 82nd Annual meeting Las Vegas*.

Zhang, R., M. K. Sen, and S. Srinivasan, 2012, A pre-stack basis pursuit inversion, *SEG 82nd Annual meeting Las Vegas*.

Zhang, R., M. K. Sen, and S. Srinivasan, 2012, A pre-stack basis pursuit inversion, *EAGE 74th Annual meeting Copenhagen*.

Zhang, R., M. K. Sen, and S. Srinivasan, 2011, CO_2 pre-injected reservoir characterization on Cranfield with basis pursuit inversion *SEG 81st Annual meeting San Antonio*.

Zhang, R. and J. Castagna, 2011, Sparse-layer inversion with basis pursuit decomposition, *SEG 81st Annual meeting San Antonio*.

Zhang, R., 2009, Footprint suppression with basis pursuit denoising, *SEG 79th Annual meeting Houston*.

Alberto Rusic, Julio Tamashiro, Maria Brito, Gabriel Gil, **Rui Zhang**, Catalina Konerding, Philipp Konerding, Jesus Garcia Hernandez, Eduardo Aguirre Cerda, and Arturo Bustos Vazquez, 2009, Application of seismic methods for interface detection in the Akal block Jurassic section, Cantarell Field, Mexico, *SEG 79th Annual meeting Houston*.

Zhang, R. and J. Castagna, 2008, Checkshot-sonic microscale tomography, *SEG 78th Annual meeting Las Vegas*.

INVITED TALK

Baylor University, January 2012, Time-lapse surface seismic inversion for CO_2 sequestration at Cranfield.

Lawrence Berkeley National Laboratory, October 2012, Time-lapse surface seismic data registration and inversion for CO_2 sequestration at Cranfield.

SKILLS

Proficient with Matlab and Fortran programming

Proficient with ProMAX and FOCUS

Proficient with Petrel, HAMPSON-RUSSELL, Landmark and SMT

PROFESSIONAL AFFILIATIONS

Society of Geophysicists (SEG)

American Geophysical Union (AGU)

European Association of Geoscientists and Engineers (EAGE)

LEADERSHIP

President of SEG Student Chapter at University of Houston	2008-2009
Student Representative to UH faculty committees	2009-2010

HONORS

• SEG/ExxonMobil Student Education Program (SEP), Las Vegas	2008
• Third Place Reginal Imperial Barrel Award Competition	2009
• SEG Foundation Sheriff Scholarship	2006-2007
• SEG Foundation General Scholarship	2007-2008
• GSH/Carlton-Farren Scholarship	2008-2009

- GSH/SEG Scholarship
- GSH/SEG Scholarship

2008-2009

2009-2010